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PATENT COOPERATION TREATY

PCT 10/541564

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 18 JUL 2005

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Applicant's or agent's file reference 62998A		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/US2004/02837		International filing date (day/month/year) 30.01.2004	Priority date (day/month/year) 30.01.2003	
International Patent Classification (IPC) or national classification and IPC D01F8/00, D01F8/06, D01F6/46				
Applicant DOW GLOBAL TECHNOLOGIES INC.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 27.08.2004		Date of completion of this report 15.07.2005		
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Blas, V Telephone No. +31 70 340- 		

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-26 as originally filed

Claims, Numbers

1-19 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
- * If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 1-19 partially
because:
 - ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-19 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet
 - ☒ the claims, or said claims Nos. 1-19 are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☐ no international search report has been established for the said claims Nos.
 - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
 - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
 - ☐ See separate sheet for further details

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2 4 13-17
	No: Claims	1 3 5 -7 9 -12 18 19
Inventive step (IS)	Yes: Claims	2 4 13-17
	No: Claims	1 3 5-7 9-12 18 19
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Present claims 1, 3 and 18 relate to an extremely large number of possible mixture of thermoplastic polymers. Support within the meaning of PCT Article 6 and disclosure within the meaning of PCT Article 5 is to be found, however, for only a very small proportion of mixtures of thermoplastic polymers claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Moreover, present claims 1 and 3 relate to polymer mixtures defined (inter alia) by reference to the following parameter:

An interfacial tension from 0.5 to 20 mN/m.

The use of this parameter in the present context is considered to lead to a lack of clarity within the meaning of PCT Article 6. It is impossible to compare the parameter the applicant has chosen to employ with what is set out in the prior art. The lack of clarity is such as to render a meaningful complete search impossible.

Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely for fibers comprising a mixture of incompatible thermoplastic polymers having different viscosities and where one of the thermoplastic polymer is a polyolefin as disclosed in the examples.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as IPEA is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure."

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Remark:

The opinion is based on the part of claims which has been searched as defined in the part III above.

- 1 The following documents are referred to in this communication:
D1 : WO 01/49908 A (CHRISTOPHER DAVID BRUCE ; MEECE BARRY
DEWAYNE (US); NEWKIRK DAVID D (U) 12 July 2001 (2001-07-12)
D2 : US 3 498 941 A (HOFTON MARTIN RICHARD ET AL) 3 March 1970 (1970-03-03)
D3 : FR 2 057 816 A (ALLIED CHEM) 21 May 1971 (1971-05-21)

2 INDEPENDENT CLAIMS 1 AND 3

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 3 is not new in the sense of Article 33(2) PCT.

Document D1 discloses multicomponent fibers, preferably in a sheath/core configuration (see page 10, lines 32-34), where at least one of the components comprises a blend of at least two different polyolefin polymers. One of them representing the continuous phase is a lower melting olefin and the other one representing the dispersed phase is a higher melting olefin.

The difference of the melting properties of the polyolefins implies a difference in viscosities. Therefore, the subject matter of claims 1 and 3 is not new.

- 2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 3 is not new in the sense of Article 33(2) PCT.

Document D2 discloses fibers obtained by spinning a melt comprising a polyolefin dispersed in an incompatible polymer selected from polyamides, polyesters, polycarbonates, polyurethanes and polyureas. Moreover, it is mentioned that differences in the melt viscosities of the two polymers result in variations of the fiber denier (see col. 2, lines 30-33)

Therefore, the subject matter of claim 3 is not new.

3. DEPENDENT CLAIMS 5-7 9-12

Dependent claims 5-7,9-12 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

4. INDEPENDENT CLAIM 18 AND DEPENDENT CLAIM 19.

Remark: Although D3 discloses fibers obtained from blends of incompatible thermoplastic polymers, this does not mean that the search is complete and it is reminded that it has been limited to the parts defined above.

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 18 and 19 is not new in the sense of Article 33(2) PCT.

Document D3 discloses fibers obtained by spinning a mixture of Nylon 6 and polyethylene terephthalate. The resulting fibers present variations in their diameter and the size of the polyester particles in the nylon matrix is comprised between 1 and 10 microns. (see example 1B)

The term "irregularities" as used in claim 19 is a vague term and not clearly

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defined and thus results in a lack of clarity in the meaning of Article 6 PCT.

As the fibers of example 1B present diameter variations, it is assumed that they present irregularities on their surface.

Therefore, the subject matter of claims 18 and 19 is not new in the sense of Article 33(2) PCT.